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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,733	02/05/2004	Kyung-Ho Yoon	04-156	8603

34704 7590 04/19/2005

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EXAMINER	
BEHREND, HARVEY E	

ART UNIT	PAPER NUMBER
3641	

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/773,733	YOON ET AL.	
	Examiner	Art Unit	
	Harvey E. Behrend	3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 1/3/05.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-6 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-6 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The proposed drawing changes have not been approved as they are drawn to new matter.

The original disclosure does not specifically state that each of the four sides or perimeter strips of the grid, are themselves, made up of a plurality of separate, individual portions which are welded or somehow, joined together to form each of the four sides of the grid as shown for example in Fig. 5B.

Note for example that is conventional in this art to form each of the four outer sides of the grid, as a single strip as shown for example in either Fromel et al (U.S. 4683115) or Steven et al (U.S. 4705663).

Further, the prior art strips of the grids shown in applicants Figs. 1, 2A, 2B, 3A, 3B, appear to how the same construction as applicants inventive strips shown in applicants Figs. 4, 5A, 5B.

2. The amendment filed 1/3/05 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The amendments to the paragraph bridging pages 13 and 14 and to the paragraph bridging pages 18 and 19.

Applicant is required to cancel the new matter in the reply to this Office Action.

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There is no proper support in the original disclosure for stating that each of the four perimeter strips is itself, formed of a plurality of individual portions or strips (40').

There is also no support in the original disclosure for the recitation of each of the four outermost corner cells of the grid as being formed of two individual unit strips.

It is noted for example, that applicants Fig. 8 shows the perimeter strip 40 as being a single or integral entity and, that this single entity includes on each end, what applicant now refers to as a unit strip 40". There is no support in the original disclosure for stating that the plurality of unit strips (40') themselves, encircle the intersecting inner strips (it would appear that one would also need the corner unit strips (what applicant now refers to as elements 40").

Note also, the discussion of this issue in section 1 above.

5. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are vague, indefinite and incomplete, particularly as to what all is meant by and is encompassed by such terms as "unit strips", "unit strips (40") to form outermost corner cells", "equiangular with", "coolant flow guide vane", "guide tap", etc.

Claim 3 is vague, indefinite and incomplete as to how and in what manner, the "coolant flow guide vanes" differ from the "guide taps".

Claim 5 is vague, indefinite and incomplete as to the relationship of the "initially bent" guide vanes, to the "tapered shape" with a rounded peak, of these same guide vanes (original claim 5 appeared to indicate such as being one and the same). The metes and bounds of the claim are hence undefined.

Applicant incorrectly argues that the use of reference numerals makes the claims definite.

As set forth in MPEP 608.01(m), the use of reference characters is to be considered as having no effect on the scope of the claims.

Thus, the mere addition of reference characters to applicants claims can not serve to change the claims from being vague and indefinite, to being definite.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1, 2 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by either Delafosse et al or Oh et al.

Delafosse et al, note Figs. 1, 8, 9.

In Oh et al, note Figs. 2 and 7.

Applicants arguments are unpersuasive of any error. It is suggested that applicant review the above noted figures of each reference.

For example, said Figs. 1, 8, 9 of Delafosse et al clearly show the vertical fuel rod support strips 5 extending vertically in the vertical openings 4 (see also col. 2 lines 64+).

In Oh et al, Fig. 2 clearly shows vertical fuel rod support strips 114 extending vertically in a vertical opening in strip 113.

9. Claims 1, 2 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by Mayet et al.

Note Figs. 6, 7, 9, 10, col. 4 line 52 to col. 5 line 45.

Applicants arguments are unpersuasive. For example, Fig. 6 of Mayet et al clearly show a vertical fuel rod support strip 52 positioned in a vertical opening (e.g. note the elongated narrow vertical space between the ends of the lead lines for numerals 52 and 54 in said Fig. 6).

10. Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of Delafosse et al, Oh et al or Mayet et al, in view of either DeMario et al or Nguyen et al, for the reasons set forth in section 7 of the 7/8/04 Office action.

Applicant has not argued this rejection as outlined above. Instead, applicant argues the teachings of the primary references. Said arguments have been discussed and rebutted above in sections 8 and 9 above and, said discussion and rebuttal is incorporated herein.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harvey Behrend whose telephone number is (703) 305-1831. The examiner can normally be reached on Tuesday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone, can be reached on (703) 306-4198. The fax phone number for the organization where this application or proceeding is assigned is (703) 306-4195.

Any inquiry of a general nature or releasing to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-1113.

HARVEY E. BEHREND
PRIMARY EXAMINER

Behrend/vs
March 23, 2005